

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Atty. Docket

RENE MONSHOUWER ET AL

NL 000771

Serial No.

Filed: CONCURRENTLY

METHOD OF MEASURING OVERLAY

Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Prior to calculation of the filing fee and examination,
please amend the above-identified application as follows:

IN THE CLAIMS

Please amend the claims as follows:

3. A method as claimed in claim 1, characterized in
that use is made of gratings for the substrate overlay mark,
and the resist overlay mark and the reference mark.

4. A method as claimed in claim 1, characterized in
that the resist overlay mark is a latent mark.

5. A method as claimed in claim 1, characterized in
that an on-axis alignment measuring device is used and in
that the reference mark is a mask alignment mark.

7. A method as claimed in claim 1, characterized in that an off-axis alignment device is used.

8. A method of manufacturing devices in at least one layer of substrates, which method comprises at least one set of the following successive steps:

- aligning a mask provided with at least one overlay mark with respect to a first substrate;
- imaging, by means of projection radiation, the overlay mark in a resist layer on the substrate;
- determining the overlay between the overlay mark formed in the resist layer and an overlay mark in the substrate and correcting overlay errors;
- imaging, by means of projection radiation, a mask pattern comprising pattern features corresponding to device features to be configured in said layer in a resist layer on each substrate wherein the device features are to be formed, and
- removing material from, or adding material to, areas of said layer, which areas are delineated by the mask pattern image, characterized in that the overlay is determined by means of the method as claimed in claim 1.

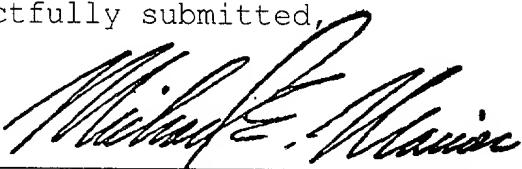
REMARKS

The foregoing amendments to claims 3-5 and 7-8 were made solely to avoid filing the claims in the multiple dependent form so as to avoid the additional filing fee.

The claims were not amended in order to address issues of patentability and Applicant respectfully reserves all rights he may have under the Doctrine of Equivalents. Applicant furthermore reserves his right to reintroduce

subject matter deleted herein at a later time during the prosecution of this application or continuing applications.

Respectfully submitted,

By 
Michael E. Marion, Reg. 32,266
Attorney
(914) 333-9641

APPENDIX

3. A method as claimed in claim 1 ~~or 2~~, characterized in that use is made of gratings for the substrate overlay mark, and the resist overlay mark and the reference mark.

4. A method as claimed in claim 1, ~~2, or 3,~~ characterized in that the resist overlay mark is a latent mark.

5. A method as claimed in claim 1, ~~2, 3 or 4,~~ characterized in that an on-axis alignment measuring device is used and in that the reference mark is a mask alignment mark.

7. A method as claimed in claim 1, ~~2, 3 or 4,~~ characterized in that an off-axis alignment device is used.

8. A method of manufacturing devices in at least one layer of substrates, which method comprises at least one set of the following successive steps:

- aligning a mask provided with at least one overlay mark with respect to a first substrate;
- imaging, by means of projection radiation, the overlay mark in a resist layer on the substrate;
- determining the overlay between the overlay mark formed in the resist layer and an overlay mark in the substrate and correcting overlay errors;
- imaging, by means of projection radiation, a mask pattern comprising pattern features corresponding to device features to be configured in said layer in a resist layer on each substrate wherein the device features are to be formed, and

- removing material from, or adding material to, areas of said layer, which areas are delineated by the mask pattern image, characterized in that the overlay is determined by means of the method as claimed in claim 1 ~~any one claims 1 to 7.~~